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RAW SEQUENCE LISTING
PATENT APPLICATION US/09/891,943

DATE: 01/10/2002
TIME: 12:30:14

Input Set: I891943.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

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1 <110> APPLICANT: Gallatin, Michael W.
2   Van der Vieren, Monica
3 <120> TITLE OF INVENTION: Novel Human 2
4 <130> FILE REFERENCE: 27866/35004
5 <140> CURRENT APPLICATION NUMBER: US/09/891,943
6 <141> CURRENT FILING DATE: 2001-06-26
7 <150> EARLIER APPLICATION NUMBER: 09/193,043
8 <151> EARLIER FILING DATE: 1998-11-16
9 <150> EARLIER APPLICATION NUMBER: 08/173,497
10 <151> EARLIER FILING DATE: 1993-12-23
11 <150> EARLIER APPLICATION NUMBER: 08/286,889
12 <151> EARLIER FILING DATE: 1994-08-05
13 <150> EARLIER APPLICATION NUMBER: 08/362,652
14 <151> EARLIER FILING DATE: 1994-12-21
15 <150> EARLIER APPLICATION NUMBER: 08/943,363
16 <151> EARLIER FILING DATE: 1997-10-03
17 <160> NUMBER OF SEQ ID NOS: 114
18 <170> SOFTWARE: PatentIn Ver. 2.0
19 <210> SEQ ID NO 1
20 <211> LENGTH: 3726
21 <212> TYPE: DNA
22 <213> ORGANISM: Homo sapiens
23 <220> FEATURE:
24 <221> NAME/KEY: CDS
25 <222> LOCATION: (3)..(3485)
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30   gga ttc aac ctg gat gtg gag gag cct acg atc ttc cag gag gat gca   95
31   Gly Phe Asn Leu Asp Val Glu Glu Pro Thr Ile Phe Gln Glu Asp Ala
32       20               25               30
33   ggc ggc ttt ggg cag agc gtg gtg cag ttc ggt gga tct cga ctc gtg   143
34   Gly Gly Phe Gly Gln Ser Val Val Gln Phe Gly Gly Ser Arg Leu Val
35       35               40               45
36   gtg gga gca ccc ctg gag gtg gtg gcg gcc aac cag acg gga cgg ctg   191
37   Val Gly Ala Pro Leu Glu Val Val Ala Ala Asn Gln Thr Gly Arg Leu
38       50               55               60
39   tat gac tgc gca gct gcc acc ggc atg tgc cag ccc atc ccg ctg cac   239
40   Tyr Asp Cys Ala Ala Ala Thr Gly Met Cys Gln Pro Ile Pro Leu His
41       65               70               75
42   atc cgc cct gag gcc gtg aac atg tcc ttg ggc ctg acc ctg gca gcc   287
43   Ile Arg Pro Glu Ala Val Asn Met Ser Leu Gly Leu Thr Leu Ala Ala
44       80               85               90               95

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| | | |
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| 45 | tcc acc aac ggc tcc cgg ctc ctg gcc tgt ggc ccg acc ctg cac aga | 335 |
| 46 | Ser Thr Asn Gly Ser Arg Leu Leu Ala Cys Gly Pro Thr Leu His Arg | |
| 47 | 100 105 110 | |
| 48 | gtc tgt ggg gag aac tca tac tca aag ggt tcc tgc ctc ctg ctg ggc | 383 |
| 49 | Val Cys Gly Glu Asn Ser Tyr Ser Lys Gly Ser Cys Leu Leu Leu Gly | |
| 50 | 115 120 125 | |
| 51 | tcg cgc tgg gag atc atc cag aca gtc ccc gac gcc acg cca gag tgt | 431 |
| 52 | Ser Arg Trp Glu Ile Ile Gln Thr Val Pro Asp Ala Thr Pro Glu Cys | |
| 53 | 130 135 140 | |
| 54 | cca cat caa gag atg gac atc gtc ttc ctg att gac ggc tct gga agc | 479 |
| 55 | Pro His Gln Glu Met Asp Ile Val Phe Leu Ile Asp Gly Ser Gly Ser | |
| 56 | 145 150 155 | |
| 57 | att gac caa aat gac ttt aac cag atg aag ggc ttt gtc caa gct gtc | 527 |
| 58 | Ile Asp Gln Asn Asp Phe Asn Gln Met Lys Gly Phe Val Gln Ala Val | |
| 59 | 160 165 170 175 | |
| 60 | atg ggc cag ttt gag ggc act gac acc ctg ttt gca ctg atg cag tac | 575 |
| 61 | Met Gly Gln Phe Glu Gly Thr Asp Thr Leu Phe Ala Leu Met Gln Tyr | |
| 62 | 180 185 190 | |
| 63 | tca aac ctc ctg aag atc cac ttc acc ttc acc caa ttc cgg acc agc | 623 |
| 64 | Ser Asn Leu Leu Lys Ile His Phe Thr Phe Thr Gln Phe Arg Thr Ser | |
| 65 | 195 200 205 | |
| 66 | ccg agc cag cag agc ctg gtg gat ccc atc gtc caa ctg aaa ggc ctg | 671 |
| 67 | Pro Ser Gln Gln Ser Leu Val Asp Pro Ile Val Gln Leu Lys Gly Leu | |
| 68 | 210 215 220 | |
| 69 | acg ttc acg gcc acg ggc atc ctg aca gtg gtg aca cag cta ttt cat | 719 |
| 70 | Thr Phe Thr Ala Thr Gly Ile Leu Thr Val Val Thr Gln Leu Phe His | |
| 71 | 225 230 235 | |
| 72 | cat aag aat ggg gcc cga aaa agt gcc aag aag atc ctc att gtc atc | 767 |
| 73 | His Lys Asn Gly Ala Arg Lys Ser Ala Lys Lys Ile Leu Ile Val Ile | |
| 74 | 240 245 250 255 | |
| 75 | aca gat ggg cag aag tac aaa gac ccc ctg gaa tac agt gat gtc atc | 815 |
| 76 | Thr Asp Gly Gln Lys Tyr Lys Asp Pro Leu Glu Tyr Ser Asp Val Ile | |
| 77 | 260 265 270 | |
| 78 | ccc cag gca gag aag gct ggc atc atc cgc tac gct atc ggg gtg gga | 863 |
| 79 | Pro Gln Ala Glu Lys Ala Gly Ile Ile Arg Tyr Ala Ile Gly Val Gly | |
| 80 | 275 280 285 | |
| 81 | cac gct ttc cag gga ccc act gcc agg cag gag ctg aat acc atc agc | 911 |
| 82 | His Ala Phe Gln Gly Pro Thr Ala Arg Gln Glu Leu Asn Thr Ile Ser | |
| 83 | 290 295 300 | |
| 84 | tca gcg cct ccg cag gac cac gtg ttc aag gtg gac aac ttt gca gcc | 959 |
| 85 | Ser Ala Pro Pro Gln Asp His Val Phe Lys Val Asp Asn Phe Ala Ala | |
| 86 | 305 310 315 | |
| 87 | ctt ggc agc atc cag aag cag ctg cag gag aag atc tat gca gtt gag | 1007 |
| 88 | Leu Gly Ser Ile Gln Lys Gln Leu Gln Glu Lys Ile Tyr Ala Val Glu | |
| 89 | 320 325 330 335 | |
| 90 | gga acc cag tcc agg gca agc agc tcc ttc cag cac gag atg tcc caa | 1055 |
| 91 | Gly Thr Gln Ser Arg Ala Ser Ser Ser Phe Gln His Glu Met Ser Gln | |
| 92 | 340 345 350 | |
| 93 | gaa ggc ttc agc aca gcc ctc aca atg gat ggc ctc ttc ctg ggg gct | 1103 |
| 94 | Glu Gly Phe Ser Thr Ala Leu Thr Met Asp Gly Leu Phe Leu Gly Ala | |

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| 96 | gtg ggg agc ttt agc tgg tct gga ggt gcc ttc ctg tat ccc cca aat | | | | |
| 97 | Val Gly Ser Phe Ser Trp Ser Gly Gly Ala Phe Leu Tyr Pro Pro Asn | | | | |
| 98 | | 370 | 375 | 380 | 1199 |
| 99 | atg agc ccc acc ttc atc aac atg tct cag gag aat gtg gac atg agg | | | | |
| 100 | Met Ser Pro Thr Phe Ile Asn Met Ser Gln Glu Asn Val Asp Met Arg | | | | |
| 101 | | 385 | 390 | 395 | 1247 |
| 102 | gac tct tac ctg ggt tac tcc acc gag cta gcc ctg tgg aag ggg gta | | | | |
| 103 | Asp Ser Tyr Leu Gly Tyr Ser Thr Glu Leu Ala Leu Trp Lys Gly Val | | | | |
| 104 | | 400 | 405 | 410 | 1295 |
| 105 | cag aac ctg gtc ctg ggg gcc ccc cgc tac cag cat acc ggg aag gct | | | | |
| 106 | Gln Asn Leu Val Leu Gly Ala Pro Arg Tyr Gln His Thr Gly Lys Ala | | | | |
| 107 | | 420 | 425 | 430 | 1343 |
| 108 | gtc atc ttc acc cag gtg tcc agg caa tgg agg aag aag gcc gaa gtc | | | | |
| 109 | Val Ile Phe Thr Gln Val Ser Arg Gln Trp Arg Lys Lys Ala Glu Val | | | | |
| 110 | | 435 | 440 | 445 | 1391 |
| 111 | aca ggg acg cag atc ggc tcc tac ttc ggg gcc tcc ctc tgc tcc gtg | | | | |
| 112 | Thr Gly Thr Gln Ile Gly Ser Tyr Phe Gly Ala Ser Leu Cys Ser Val | | | | |
| 113 | | 450 | 455 | 460 | 1439 |
| 114 | gat gtg gac agc gat ggc agc acc gac ctg atc ctc att ggg gcc ccc | | | | |
| 115 | Asp Val Asp Ser Asp Gly Ser Thr Asp Leu Ile Leu Ile Gly Ala Pro | | | | |
| 116 | | 465 | 470 | 475 | 1487 |
| 117 | cat tac tat gag cag acc cga ggg ggc cag gtg tcc gtg tgt ccc ttg | | | | |
| 118 | His Tyr Tyr Glu Gln Thr Arg Gly Gly Gln Val Ser Val Cys Pro Leu | | | | |
| 119 | | 480 | 485 | 490 | 1535 |
| 120 | cct agg ggg cag agg gtg cag tgg cag tgt gac gct gtt ctc cgt ggt | | | | |
| 121 | Pro Arg Gly Gln Arg Val Gln Trp Gln Cys Asp Ala Val Leu Arg Gly | | | | |
| 122 | | 500 | 505 | 510 | 1583 |
| 123 | gag cag ggc cac ccc tgg ggc cgc ttt ggg gca gcc ctg aca gtg ttg | | | | |
| 124 | Glu Gln Gly His Pro Trp Gly Arg Phe Gly Ala Ala Leu Thr Val Leu | | | | |
| 125 | | 515 | 520 | 525 | 1631 |
| 126 | ggg gat gtg aat gag gac aag ctg ata gac gtg gcc att ggg gcc cgg | | | | |
| 127 | Gly Asp Val Asn Glu Asp Lys Leu Ile Asp Val Ala Ile Gly Ala Pro | | | | |
| 128 | | 530 | 535 | 540 | 1679 |
| 129 | gga gag cag gag aac cgg ggt gct gtc tac ctg ttt cac gga gcc tca | | | | |
| 130 | Gly Glu Gln Glu Asn Arg Gly Ala Val Tyr Leu Phe His Gly Ala Ser | | | | |
| 131 | | 545 | 550 | 555 | 1727 |
| 132 | gaa tcc ggc atc agc ccc tcc cac agc cag cgg att gcc agc tcc cag | | | | |
| 133 | Glu Ser Gly Ile Ser Pro Ser His Ser Gln Arg Ile Ala Ser Ser Gln | | | | |
| 134 | | 560 | 565 | 570 | 1775 |
| 135 | ctc tcc ccc agg ctg cag tat ttt ggg cag gcg ctg agt ggg ggt cag | | | | |
| 136 | Leu Ser Pro Arg Leu Gln Tyr Phe Gly Gln Ala Leu Ser Gly Gly Gln | | | | |
| 137 | | 580 | 585 | 590 | 1823 |
| 138 | gac ctc acc cag gat gga ctg atg gac ctg gcc gtg ggg gcc cgg ggc | | | | |
| 139 | Asp Leu Thr Gln Asp Gly Leu Met Asp Leu Ala Val Gly Ala Arg Gly | | | | |
| 140 | | 595 | 600 | 605 | 1871 |
| 141 | cag gtg ctc ctg ctc agg agt ctg ccg gtg ctg aaa gtg ggg gtg gcc | | | | |
| 142 | Gln Val Leu Leu Leu Arg Ser Leu Pro Val Leu Lys Val Gly Val Ala | | | | |
| 143 | | 610 | 615 | 620 | 1919 |
| 144 | atg aga ttc agc cct gtg gag gtg gcc aag gct gtg tac cgg tgc tgg | | | | |

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| 146 | 625 | 630 | |
| 147 | gaa gag aag ccc agt gcc ctg gaa gct ggg gac gcc acc gtc tgt ctc | 1967 | |
| 148 | Glu Glu Lys Pro Ser Ala Leu Glu Ala Gly Asp Ala Thr Val Cys Leu | 655 | |
| 149 | 640 | 645 | |
| 150 | acc atc cag aaa agc tca ctg gac cag cta ggt gac atc caa agc tct | 2015 | |
| 151 | Thr Ile Gln Lys Ser Ser Leu Asp Gln Leu Gly Asp Ile Gln Ser Ser | 670 | |
| 152 | 660 | 665 | |
| 153 | gtc agg ttt gat ctg gca ctg gac cca ggt cgt ctg act tct cgt gcc | 2063 | |
| 154 | Val Arg Phe Asp Leu Ala Leu Asp Pro Gly Arg Leu Thr Ser Arg Ala | 685 | |
| 155 | 675 | 680 | |
| 156 | att ttc aat gaa acc aag aac ccc act ttg act cga aga aaa acc ctg | 2111 | |
| 157 | Ile Phe Asn Glu Thr Lys Asn Pro Thr Leu Thr Arg Arg Lys Thr Leu | 700 | |
| 158 | 690 | 695 | |
| 159 | gga ctg ggg att cac tgt gaa acc ctg aag ctg ctt ttg cca gat tgt | 2159 | |
| 160 | Gly Leu Gly Ile His Cys Glu Thr Leu Lys Leu Leu Leu Pro Asp Cys | 715 | |
| 161 | 705 | 710 | |
| 162 | gtg gag gat gtg gtg agc ccc atc att ctg cac ctc aac ttc tca ctg | 2207 | |
| 163 | Val Glu Asp Val Val Ser Pro Ile Ile Leu His Leu Asn Phe Ser Leu | 735 | |
| 164 | 720 | 725 | |
| 165 | gtg aga gag ccc atc ccc tcc ccc cag aac ctg cgt cct gtg ctg gcc | 2255 | |
| 166 | Val Arg Glu Pro Ile Pro Ser Pro Gln Asn Leu Arg Pro Val Leu Ala | 750 | |
| 167 | 740 | 745 | |
| 168 | gtg ggc tca caa gac ctc ttc act gct tct ctc ccc ttc gag aag aac | 2303 | |
| 169 | Val Gly Ser Gln Asp Leu Phe Thr Ala Ser Leu Pro Phe Glu Lys Asn | 765 | |
| 170 | 755 | 760 | |
| 171 | tgt ggg caa gat ggc ctc tgt gaa ggg gac ctg ggt gtc acc ctc agc | 2351 | |
| 172 | Cys Gly Gln Asp Gly Leu Cys Glu Gly Asp Leu Gly Val Thr Leu Ser | 780 | |
| 173 | 770 | 775 | |
| 174 | ttc tca ggc ctg cag acc ctg acc gtg ggg agc tcc ctg gag ctc aac | 2399 | |
| 175 | Phe Ser Gly Leu Gln Thr Leu Thr Val Gly Ser Ser Leu Glu Leu Asn | 795 | |
| 176 | 785 | 790 | |
| 177 | gtg att gtg act gtg tgg aac gca ggt gag gat tcc tac gga acc gtg | 2447 | |
| 178 | Val Ile Val Thr Val Trp Asn Ala Gly Glu Asp Ser Tyr Gly Thr Val | 815 | |
| 179 | 800 | 805 | |
| 180 | gtc agc ctc tac tat cca gca ggg ctg tgc cac cga cgg gtg tca gga | 2495 | |
| 181 | Val Ser Leu Tyr Tyr Pro Ala Gly Leu Ser His Arg Arg Val Ser Gly | 830 | |
| 182 | 820 | 825 | |
| 183 | gcc cag aag cag ccc cat cag agt gcc ctg cgc ctg gca tgt gag aca | 2543 | |
| 184 | Ala Gln Lys Gln Pro His Gln Ser Ala Leu Arg Leu Ala Cys Glu Thr | 845 | |
| 185 | 835 | 840 | |
| 186 | gtg ccc act gag gat gag ggc cta aga agc agc cgc tgc agt gtc aac | 2591 | |
| 187 | Val Pro Thr Glu Asp Glu Gly Leu Arg Ser Ser Arg Cys Ser Val Asn | 860 | |
| 188 | 850 | 855 | |
| 189 | cac ccc atc ttc cat gag ggc tct aac ggc acc ttc ata gtc aca ttc | 2639 | |
| 190 | His Pro Ile Phe His Glu Gly Ser Asn Gly Thr Phe Ile Val Thr Phe | 875 | |
| 191 | 865 | 870 | |
| 192 | gat gtc tcc tac aag gcc acc ctg gga gac agg atg ctt atg agg gcc | 2687 | |
| 193 | Asp Val Ser Tyr Lys Ala Thr Leu Gly Asp Arg Met Leu Met Arg Ala | 895 | |
| 194 | 880 | 885 | |

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| 196 | Ser Ala Ser Ser Glu Asn Asn Lys Ala Ser Ser Ser Lys Ala Thr Phe | |
| 197 | 900 905 910 | |
| 198 | cag ctg gag ctc ccg gtg aag tat gca gtc tac acc atg atc agc agg | 2783 |
| 199 | Gln Leu Glu Leu Pro Val Lys Tyr Ala Val Tyr Thr Met Ile Ser Arg | |
| 200 | 915 920 925 | |
| 201 | cag gaa gaa tcc acc aag tac ttc aac ttt gca acc tcc gat gag aag | 2831 |
| 202 | Gln Glu Glu Ser Thr Lys Tyr Phe Asn Phe Ala Thr Ser Asp Glu Lys | |
| 203 | 930 935 940 | |
| 204 | aaa atg aaa gag gct gag cat cga tac cgt gtg aat aac ctc agc cag | 2879 |
| 205 | Lys Met Lys Glu Ala Glu His Arg Tyr Arg Val Asn Asn Leu Ser Gln | |
| 206 | 945 950 955 | |
| 207 | cga gat ctg gcc atc agc att aac ttc tgg gtt cct gtc ctg ctg aac | 2927 |
| 208 | Arg Asp Leu Ala Ile Ser Ile Asn Phe Trp Val Pro Val Leu Leu Asn | |
| 209 | 960 965 970 975 | |
| 210 | ggg gtg gct gtg tgg gat gtg gtc atg gag gcc cca tct cag agt ctc | 2975 |
| 211 | Gly Val Ala Val Trp Asp Val Val Met Glu Ala Pro Ser Gln Ser Leu | |
| 212 | 980 985 990 | |
| 213 | ccc tgt gtt tca gag aga aaa cct ccc cag cat tct gac ttc ctg acc | 3023 |
| 214 | Pro Cys Val Ser Glu Arg Lys Pro Pro Gln His Ser Asp Phe Leu Thr | |
| 215 | 995 1000 1005 | |
| 216 | cag att tca aga agt ccc atg ctg gac tgc tcc att gct gac tgc ctg | 3071 |
| 217 | Gln Ile Ser Arg Ser Pro Met Leu Asp Cys Ser Ile Ala Asp Cys Leu | |
| 218 | 1010 1015 1020 | |
| 219 | cag ttc cgc tgt gac gtc ccc tcc ttc agc gtc cag gag gag ctg gat | 3119 |
| 220 | Gln Phe Arg Cys Asp Val Pro Ser Phe Ser Val Gln Glu Glu Leu Asp | |
| 221 | 1025 1030 1035 | |
| 222 | ttc acc ctg aag ggc aat ctc agt ttc ggc tgg gtc cgc gag aca ttg | 3167 |
| 223 | Phe Thr Leu Lys Gly Asn Leu Ser Phe Gly Trp Val Arg Glu Thr Leu | |
| 224 | 1040 1045 1050 1055 | |
| 225 | cag aag aag gtg ttg gtc gtg agt gtg gct gaa att acg ttc gac aca | 3215 |
| 226 | Gln Lys Lys Val Leu Val Val Ser Val Ala Glu Ile Thr Phe Asp Thr | |
| 227 | 1060 1065 1070 | |
| 228 | tcc gtg tac tcc cag ctt cca gga cag gag gca ttt atg aga gct cag | 3263 |
| 229 | Ser Val Tyr Ser Gln Leu Pro Gly Gln Glu Ala Phe Met Arg Ala Gln | |
| 230 | 1075 1080 1085 | |
| 231 | atg gag atg gtg cta gaa gaa gac gag gtc tac aat gcc att ccc atc | 3311 |
| 232 | Met Glu Met Val Leu Glu Asp Glu Val Tyr Asn Ala Ile Pro Ile | |
| 233 | 1090 1095 1100 | |
| 234 | atc atg ggc agc tct gtg ggg gct ctg cta ctg ctg gcg ctc atc aca | 3359 |
| 235 | Ile Met Gly Ser Ser Val Gly Ala Leu Leu Leu Ala Leu Ile Thr | |
| 236 | 1105 1110 1115 | |
| 237 | gcc aca ctg tac aag ctt ggc ttc ttc aaa cgc cac tac aag gaa atg | 3407 |
| 238 | Ala Thr Leu Tyr Lys Leu Gly Phe Phe Lys Arg His Tyr Lys Glu Met | |
| 239 | 1120 1125 1130 1135 | |
| 240 | ctg gag gac aag cct gaa gac act gcc aca ttc agt ggg gac gat ttc | 3455 |
| 241 | Leu Glu Asp Lys Pro Glu Asp Thr Ala Thr Phe Ser Gly Asp Asp Phe | |
| 242 | 1140 1145 1150 | |
| 243 | agc tgt gtg gcc cca aat gtg cct ttg tcc taataatcca ctttctgtt | 3505 |
| 244 | Ser Cys Val Ala Pro Asn Val Pro Leu Ser | |